300711

U.S. Department
of Transportation

**Federal Aviation
Administration**

Central Region
Iowa, Kansas,
Missouri, Nebraska

901 Locust Street
Kansas City, Missouri 64106

October 1, 2004

Mr. Raymond A. Mosley
Director, Office of the Federal Register
National Archives and Records Administration
Washington, DC 20408

Dear Mr. Mosley:

This is to certify that the enclosed uncoded diskette furnished with the following NPRM AD action contains a true copy of the original signed document:

Subject: Docket No. FAA 2004-18743 - 4
Directorate Identifier 2004-CE-23-AD
Name of file on disk: 04-ce-23.np

The diskette should be used by the Government Printing Office (GPO) in preparing the final Federal Register document for publication.

If you have any questions, please feel free to contact me at (816) 329-4148.

Sincerely,

M. Scott Wessley

M. Scott Wessley,
Certifying Officer

[4910-13-U]

DEPARTMENT OF TRANSPORTATION (DOT)

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA 2004-18743; Directorate Identifier 2004-CE-23-AD]

RIN 2120-AA64

Airworthiness Directives; GARMIN International Inc. GTX 33, GTX 33D, GTX 330, and GTX 330D Mode S Transponders

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2004-10-15, which applies to certain GTX 330 and GTX 330D Mode S transponders that are installed on airplanes. AD 2004-10-15 currently requires you to install GTX 330/330D Software Upgrade Version 3.03, 3.04, or 3.05. This proposed AD applies to certain GTX 33, GTX 33D, GTX 330, and GTX 330D Mode S transponders that are installed on airplanes and is the result of observations that the GTX 33/33D/330/330D may detect, from other airplanes, the S1 (suppression) interrogating pulse below the minimum trigger level (MTL) and, in some circumstances, not reply. The GTX 33/33D/330/330D should still reply even if it detects S1 interrogating pulses below the MTL. Consequently, this proposed AD would require you to install GTX 33/33D/330/330D Software Upgrade Version 3.03 or 3.06. Software Upgrade Versions 3.03 and 3.06 correct a TAS, TCAD, and TCAS I system "whisper-shout" problem that could potentially lead to the aircraft not being visible at certain ranges. TCAS II systems are not affected. We are issuing this proposed AD to prevent interrogating aircraft from possibly receiving inaccurate replies due to suppression from aircraft equipped with the GTX 33/33D/330/330D Mode S transponders when the pulses are below the MTL. The inaccurate replies could result in reduced vertical separation.

DATES: We must receive any comments on this proposed AD by November 15, 2004.

ADDRESSES: Use one of the following to submit comments on this proposed AD:

- DOT Docket web site: Go to http://dms.dot.gov and follow the instructions for sending your comments electronically.
- Government-wide rulemaking web site: Go to http://www.regulations.gov and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; US Department of Transportation, 400 Seventh Street, S.W., Nassif Building, Room PL-401, Washington, DC 20590-001.
- Fax: 1-202-493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, S.W., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

To get the service information identified in this proposed AD, contact GARMIN International Inc. 1200 East 151st Street, Olathe, KS 66062; telephone: 913-397-8200.

To view the comments to this proposed AD, go to http://dms.dot.gov. This is docket number FAA 2004-18743.

FOR FURTHER INFORMATION CONTACT: Roger A. Souter, FAA, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: 316-946-4134; facsimile: 316-946-4107; email address: roger.souter@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

How do I comment on this proposed AD? We invite you to submit any written relevant data, views, or arguments regarding this proposal. Send your comments to an address

listed under ADDRESSES. Include the docket number, "FAA 2004-18743; Directorate Identifier 2004-CE-23-AD" at the beginning of your comments. We will post all comments we receive, without change, to http://dms.dot.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed rulemaking. Using the search function of our docket web site, anyone can find and read the comments received into any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). This is docket number FAA 2004-18743. You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78) or you may visit http://dms.dot.gov.

Are there any specific portions of this proposed AD I should pay attention to? We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. If you contact us through a nonwritten communication and that contact relates to a substantive part of this proposed AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend this proposed AD in light of those comments and contacts.

Docket Information

Where can I go to view the docket information? You may view the AD docket that contains the proposal, any comments received, and any final disposition in person at the DMS Docket Offices between 9:00 a.m. and 5:00 p.m. (eastern standard time), Monday through Friday, except Federal holidays. The Docket Office (telephone 1-800- 647-5227) is located on the plaza level of the Department of Transportation NASSIF Building at the street address stated in ADDRESSES. You may also view the AD docket on the Internet

at http://dms.dot.gov. The comments will be available in the AD docket shortly after the DMS receives them.

Discussion

Has FAA taken any action to this point? The GTX 330/GTX 330D may detect from other aircraft the S1 (suppression) interrogating pulse below the MTL and, in some circumstances, does not reply. The GTX 330/330D should still reply even if it detects S1 interrogating pulses below the MTL, and this caused FAA to issue AD 2004-10-15, Amendment 39-13645 (69 FR 29212, dated May 21, 2004). AD 2004-10-15 currently requires the incorporation of GTX 330/330D Software Upgrade to at least Version, 3.03, 3.04, or 3.05 on certain GTX 330 and GTX 330D Mode S transponders that are installed on airplanes.

What has happened since AD 2004-10-15 to initiate this proposed action? After the issuance of AD 2004-10-15, GARMIN International Inc. discovered that minor changes made to GTX 330/330D Software Upgrades 3.04 and 3.05 inadvertently removed the correction to not suppress the S1 pulse below MTL. Garmin also discovered the Software Upgrade must be installed on GTX 33 and GTX 33D Mode S transponders as well as the GTX 330 and GTX 330D Mode S transponders.

What is the potential impact if FAA took no action? We are issuing this proposed AD to incorporate these changes and to prevent interrogating aircraft from possibly receiving inaccurate replies due to suppression from aircraft equipped with the GTX 33/33D/330/330D Mode S transponders when the pulses are below the MTL. Software Upgrade Version 3.03 and 3.06 correct a TAS, TCAD, and TCAS I system "whisper-shout" problem that could potentially lead to the aircraft not being visible at certain ranges. TCAS II systems are not affected. The inaccurate replies could result in reduced vertical separation.

Is there service information that applies to this subject? GARMIN International Inc. has issued the Service Bulletin No. 0304, Revision B, dated June 12, 2003 (which incorporates Software Upgrade 3.03), and Service Bulletin No. 0409, dated July 19, 2004 (which incorporates Software Upgrade 3.06).

What are the provisions of this service information? The service bulletins include:

- modification instructions for upgrading to software version 3.03 or 3.06 and
- a listing of parts required to perform the modification.

FAA's Determination and Requirements of this Proposed AD

What has FAA decided? We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other products of this same type design. For this reason, we are proposing AD action.

What would this proposed AD require? This proposed AD would supersede AD 2004-10-15 with a new AD that would require you to install Garmin GTX 33/33D/330/330D Software Upgrade Version 3.03 or 3.06.

How does the revision to 14 CFR part 39 affect this proposed AD? On July 10, 2002, we published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

How many airplanes would this proposed AD impact? We estimate that this proposed AD affects 5400 airplanes in the U.S. registry.

What would be the cost impact of this proposed AD on owners/operators of the affected airplanes? Garmin International Inc. will provide warranty only for Service Bulletin No. 0409, dated July 19, 2004 (which incorporates Software Upgrade 3.06)

installation as specified in the service information. Although Software Upgrade 3.03 is still in compliance with this proposed AD, if previously installed, Software Upgrade 3.03 is no longer available through Garmin.

What is the difference between the cost impact of this proposed AD and the cost impact of AD 2004-10-15? Garmin provided warranty credit for AD 2004-10-15 and will provide warranty credit only for installation of Service Bulletin No. 0409, dated July 19, 2004 (which incorporates Software Upgrade 3.06) in the proposed AD.

Regulatory Findings

Would this proposed AD impact various entities? We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

Would this proposed AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this proposed AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this proposed AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. FAA 2004-18743; Directorate Identifier 2003-CE-39-AD" in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR part 39 as follows:

PART 39 – AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2004-10-15, Amendment 39-13645 (69 FR 29212-15, dated May 21, 2004), and by adding a new AD to read as follows:

GARMIN International Inc.: Docket No. FAA 2004-18743; Directorate Identifier 2004-CE-23-AD

When is the Last Date I can Submit Comments on this Proposed AD?

(a) We must receive comments on this proposed airworthiness directive (AD) by November 15, 2004.

What Other ADs Are Affected By This Action?

(b) This AD supersedes AD 2004-10-15, Amendment 39-13645.

What Airplanes Are Affected by This AD?

(c) This AD affects GARMIN International Inc. GTX 33, GTX 33D, GTX 330, and GTX 330D Mode S transponders that are installed on, but not limited to, the following airplanes, certificated in any category:

Manufacturer	Model
(1) Aermacchi S.p.A.	S.205-18/F, S.205-18/R, S.205-20/R, S.205-22/R, S208, S.208A, F.260, F.260B, F.260C, F.260D, F.260E, F.260F, S.211A
(2) Aeronautica Macchi S.p.A.	AL 60, AL 60-B, AL 60-F5, AL 60-C5, AM-3

(3) Aerostar Aircraft Corporation	PA-60-600 (Aerostar 600), PA-60-601 (Aerostar 601), PA-60-601P (Aerostar 601P), PA-60-602P (Aerostar 602P), PA-60-700P (Aerostar 700P), 360, 400
(4) Alexandria Aircraft, LLC	14-19, 14-19-2, 14-19-3, 14-19-3A, 17-30, 17-31, 17-31TC, 17-30A, 17-31A, 17-31ATC
(5) Alliance Aircraft Group LLC	15A, 20, H-250, H-295 (USAFU-10D), HT-295, H391 (USAFYL-24), H391B, H-395 (USAFL-28A or U-10B), H-395A, H-700, H-800, HST-550, HST-550A (USAF AU-24A), 500
(6) American Champion Aircraft Corp.	402, 7GCA, 7GCB, 7KC, 7GCBA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC
(7) Sky International Inc.	A-1, A-1A, A-1B, S-1S, S-1T, S-2, S-2A, S-2S, S-2C
(8) B-N Group Ltd.	BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-8, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN-2T, BN-2T-4R, BN-2A MK.III, BN2A MK. III-2, BN2A MK. 111-3
(9) Bellanca	14-13, 14-13-2, 14-13-3, 14-13-3W
(10) Bombardier Inc.	(Otter) DHC-3, DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300
(11) Cessna Aircraft Company	170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F (USAF T-41A), 172G, 172H (USAF T041A), 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 172R, 172S, 172RG, P172D, R172E (USAF T-41 B) (USAF T-41 C AND D), R172F (USAF T-41 D), R175G, R172H (USAF T-41 D), R172J, R172K, 175, 175A, 175B, 175C, 177, 177A, 177B, 177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 182S, 182T, R182, T182, TR182, T182T, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 190, (LC-126A, B, C) 195, 195A, 195B, 210, 210A, 210B, 210C, 210D, 210E, 210F, T210F, 210G, T210G, 210H, T210H, 210J, T210J, 210K, T210K, 210L, T210L, 210M, T210M, 210N, P210N, T210N, 210R, P210R, T210R, 210-5 (205), 210-5A (205A), 206, P206, P206A,

	P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TU206D, TU206E, TU206F, TU206G, 206H, T206H, 207, 207A, T207, T207A, 208, 208A, 208B, 310, 310A (USAF U-3A), 310B, 310C, 310D, 310E (USAF U-3B), 310F, 310G, 310H, E310H, 310I, 310J, 310J-1, E310J, 310K, 310L, 310N, 310P, T310P, 310Q, T310Q, 310R, T310R, 320, 320A, 320B, 320C, 320D, 320E, 320F, 320-1, 335, 340, 340A, 336, 337, 337A (USAF 02B), 337B, T337B, 337C, 337E, T337E, T337C, 337D, T337D, M337B (USAF 02A), 337F, T337F, T337G, 337G, 337H, P337H, T337H, T337H-SP, 401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425, 404, 406, 441
(12) Cirrus Design Corporation	SR20, SR22
(13) Commander Aircraft Company	112, 112TC, 112B, 112TCA, 114, 114A, 114B, 114TC
(14) de Havilland Inc.	DHC-2 Mk. I, DHC-2 Mk.II, DHC-2 Mk. III
(15) Dynac Aerospace Corporation	(Volaire) 10, (Volaire) 10A, (Aero Commander) 100, (Aero Commander) 100A, (Aero Commander) 100-180
(16) Diamond Aircraft Industries	DA 20-A1, DA20-C1, DA 40
(17) Empressa Brasileira de Aeronautica S.A. EMBRAER	EMB-110P1, EMB-110P2
(18) Extra Flugzeugbau Gmbh	EA300, EA300L, EA300S, EA300/200, EA-400
(19) Fairchild Aircraft Corporation	SA26-T, SA26-AT, SA226-T, SA226-AT, SA226-T(B), SA227-AT, SA227-TT, SA226-TC, SA227-AC (C-26A), SA227-CC, SA227-DC (C-26B)
(20) Global Amphibians, LLC	Colonial C-1, Colonial C-2, Lake LA-4, Lake LA-4A, Lake LA-4P, Lake LA-4-200, Lake Model 250
(21) Grob-Werke	G115, G115A, G115B, G115C, G115C2, G115D, G115D2, G115EG, G120A
(22) Lancair Company	LC40-550FG
(23) LanShe Aerospace, LLC	MAC-125C, MAC-145, MAC-145A, MAC-145B
(24) Learjet Inc.	23

(25) Lockheed Aircraft Corporation	18
(26) Luscombe Aircraft Corporation	11A, 11E
(27) Maule Aerospace Technology, Inc.	Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4180C, M-4-180S, M-4-180T, M-4-210, M-4-210C, M-4-210S, M-4-210T, M-4-220, M-4-220S, M-4-220T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-5-220C, M-5-235C, M-6-180, M-6-235, M-7-235, MX-7-235, MX-7-180, MX-7-420, MXT-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, M-7-420AC, MX-7-160C, MX-7-180AC, M-7-420A, MT-7-420
(28) Mitsubishi Heavy Industries, Ltd.	MU-2B-25, MU-2B-35, MU-2B-26, MU-2B-36, MU-2B-26A, MU-2B-36A, MU-2B-40, MU-2B-60, MU-2B, MU-2B-20, MU-2B-20, MU-2B-15
(29) Mooney Airplane Company, Inc.	M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S, M22
(30) Moravan a.s.	Z-242L, Z-143L
(31) Navion Aircraft Company, Ltd.	NAVION, Navion (L-17A), Navion (L17B), Navion (L-17C), Navion B, Navion D, Navion E, Navion F, Navion G, Navion H
(32) New Piper Aircraft, Inc.	PA-12, PA-12S, PA-18, PA-18S, PA-18 "105" (Special), PA-18S "105" (Special), PA-18A, PA-18 "125" (Army L-21A), PA-18S "125," PA-18AS "125," PA-18 "135" (Army L-21B), PA-18A "135," PA-18S "135," PA-18 "150," PA-18A "150," PA-18S "150," PA-18AS "150," PA-19 (Army L-18B), PA-19S, PA-20, PA-20S, PA-20 "115," PA-20S "115," PA-20 "135," PA-20S "135," PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160, PA-23, PA-23-160, PA-23-235, PA-23-250, PA-E23-250, PA-24, PA-24-250, PA-24-260, PA-24-400, PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-235, PA-28S-160, PA-28R-180, PA-28S-180, PA-28-181, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28-201T, PA-28-236, PA-30, PA-39, PA-40, PA-31P, PA-31T, PA-31T1, PA-31T2, PA-31T3, PA-31P-350, PA-32-260, PA-32-300, PA-32S-300, PA-32R-300, PA-32RT-300, PA-32RT-300T, PA-32R-301 (SP), PA-32R-301 (HP), PA-32R-301T, PA-32-301,

	PA-32-301T, PA-34-200, PA-34-200T, PA-34-220T, PA-42, PA-42-720, PA-42-1000, PA-42-720R, PA-44-180, PA-44-180T, PA-46-310P, PA-46-350P, PA-46-500TP
(33) Ostmecklenburgische Flugzeugbau GmgH	OMF-100-160
(34) Piaggio Aero Industries S.p.A.	P-180
(35) Pilatus Aircraft Ltd.	PILATUS PC-12, PILATUS PC-12/45, PC-6, PC-6-H1, PC-6-H2, PC-6/350, PC-6/350-H1, PC-6/350-H2, PC-6/A, PC-6/A-H1, PA-6/A-H2, PC-6/B-H2, PC-6/B1-H2, PC-6/B2-H2, PC-6/B2-H4, PC-6/C-H2, PC-6/C1-H2, PC-7
(36) Prop-Jets, Inc.	200, 200A, 200B, 200C, 200D, 400
(37) Panstwowe Zakladv Lotnicze (PZL)	PZL-104 WILGA 80, PZL-104M WILGA 2000, PZL-WARSZAWA, PZL-KOLIBER 150A, PZL-KOLIBER 160A
(38) PZL WSK/Mielec Obrsk	PZL M20 03, PZL M26 01
(39) Raytheon	35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A, F33C, G33, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 36, A36, A36TC, B36TC, 35, A35, B35, C35, D35, E35, F35, G35, 35R, F90, 76, 200, 200C, 200CT, 200T, A200, B200, B200C, B200CT, B200T, 300, 300LW, B300, B300C, 1900, 1900C, 1900D, A100-1 (U-21J), A200 (C-12A), A200 (C-12C), A200C (UC-12B), A200CT (C-12D), A200CT (FWC-12D), A200CT (RC-12D), A200CT (C-12F), A200CT (RC-12G), A200CT (RC-12H), A200CT (RC-12K), A200CT (RC-12P), A200CT (RC-12Q), B200C (C-12F), B200C (UC-12F), B200C (UC-12M), B200C (C-12R), 1900C (C-12J), 65, A65, A65-8200, 65-80, 65-A80, 65-A80-8800, 65-B80, 65-88, 65-A90, 70, B90, C90, C90A, E90, H90, 65-A90-1, 65-A90-2, 65-A90-3, 65-A90-4, 95, B95, B95A, D95A, E95, 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B (T-42A), 95-C55, 95-C55A, D55, D55A, E55, E55A, 56TC, A56TC, 58, 58A, 58P, 58PA, 58TC, 58TCA, 99, 99A, 99A (FACH), A99, A99A, B99, C99, 100, A100 (U-21F), A100A, A100C, B100, 2000, 3000, 390, 19A, B19, M19A, 23, A23, A23A, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R, 60, A60, B60, 18D, A18A, A18D, S18D, SA18A, SA18D, 3N, 3NM, 3TM, JRB-6, D18C, D18S, E18S, RC-45J (SNB-5P), E18S-9700, G18S, H18, C-45G, TC-45G, C-45H, TC-45H, TC-45J, UC-45J (SNB-5), 50 (L-23A), B50 (L-23B), C50, D50

	(L-23E), D50A, D50B, D50C, D50E-5990, E50 (L-23D, RL-23D), F50, G50, H50, J50, 45 (YT-34), A45 (T-34A or B-45), D45 (T-34B)
(40) Rockwell International Corporation	BC-1A, AT-6 (SNJ-2), AT-6A (SNJ-3), AT-6B, AT-6C (SNJ-4), AT-6D (SNJ-5), AT-6F (SNF-6), SNJ-7, T-6G, NOMAD NA-260
(41) Short Brothers & Harland Ltd.	SC-7 Series 2, SC-7 Series 3
(42) Slingsby Aviation Ltd.	T67M260, T67M260-T3A
(43) SOCATA – Group Aerospatiale	TB9, TB10, TB20, TB21, TB200, TBM 700, M.S. 760, M.S. 760 A, M.S. 760 B, Rallye 100S, Rallye 150ST, Rallye 150T, Rallye 235E, Rallye 235C, MS 880B, MS 885, MS 894A, MS 893A, MS 892A-150, MS 892E-150, MS 893E, MS 894E, GA-7
(44) Tiger Aircraft LLC	AA-1, AA-1A, AA-1B, AA-1C, AA-5, AA-5A, AA-5B, AG-5B
(45) Twin Commander Aircraft Corporation	500, 500-A, 500-B, 500-U, 500-S, 520, 560, 560-A, 560-E, 560F, 680, 680E, 680F, 680FL, 680FL(P), 680T, 680V, 680W, 681, 685, 690, 690A, 690B, 690C, 690D, 695, 695A, 695B, 720, 700
(46) Univair Aircraft Corporation	108, 108-1, 108-2, 108-3, 108-5
(47) Vulcanair S.p.A.	P68, P68B, P68C, P68C-TC, P68 "Observer," P68 "Observer 2," P68TC "Observer," AP68TP300 "Spartacus," AP68TP 600 "Viator"
(48) Zenair Ltd.	CH2000

What is the Unsafe Condition Presented in This AD?

(d) This AD is the result of observations that the GTX 33/33D/330/330D may detect, from other airplanes, the S1 (suppression) interrogating pulse below the minimum trigger level (MTL) and, in some circumstances, not reply. The GTX 33/33D/330/330D should still reply even if it detects S1 interrogating pulses below the MTL. The actions specified in this AD are intended to prevent interrogating aircraft from possibly receiving

inaccurate replies, due to suppression, from aircraft equipped with the GTX 33/33D/330/330D Mode S transponders when the pulses are below the minimum trigger level (MTL). Software Upgrade Versions 3.03 and 3.06 correct a TAS, TCAD, and TCAS I system "whisper-shout" problem that could potentially lead to the aircraft not being visible at certain ranges. TCAS II systems are not affected. The inaccurate replies could result in reduced vertical separation.

What Must I do to Address This Problem?

(e) To address this problem, you must do the following:

Actions	Compliance	Procedures
Install GTX 33/33D/330/330D Software Upgrade to at least Version 3.03 or 3.06.	Install the software upgrade within 180 days after the effective date of this AD, unless already accomplished.	Follow GARMIN Mandatory Software Service Bulletin No.: 0304, Rev B, dated June 12, 2003 (Software Upgrade 3.03) or GARMIN Mandatory Software Service Bulletin No.: 0409, dated July 19, 2004 (Software Upgrade 3.06).

May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Wichita Aircraft Certification Office (ACO), FAA. For information on any already approved alternative methods of compliance, contact Roger A. Souter, FAA, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: 316-946-4134; facsimile: 316-946-4107; email address: roger.souter@faa.gov.

May I Get Copies of the Documents Referenced in this AD?

(g) To get copies of the documents referenced in this AD, contact GARMIN International Inc. 1200 East 151st Street, Olathe, KS 66062; telephone: 913-397-8200. To view the AD docket, go to the Docket Management Facility; US Department of Transportation, 400 Seventh Street, S.W., Nassif Building, Room PL-401, Washington, DC, or on the Internet at http://dms.dot.gov. The docket number is FAA 2004-18743.

Issued in Kansas City, Missouri, on September 29, 2004

Dorenda D. Baker,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

Certified to be a true copy of the original

M. Scott Wessley
CERTIFYING OFFICER